

KSC LOD NO. 17B
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KSC LAUNCH OPERATIONS DIRECTIVE NO. 17B

To: Distribution

From: W. J. Kapryan
W. J. Kapryan
Director of Launch Operations

Subject: SUPPORT REQUIREMENTS PLANNING AND DOCUMENTATION

1.1 PURPOSE

This directive establishes and defines the basic policies and procedures for the preparation, review, approval, revision, publication and distribution of all Launch Operations support requirements and the processing of support commitments. It further affixes the responsibilities for the processing and/or coordination of these documents and implementation of the NASA/KSC requirements documentation system.

2.1 SCOPE

This directive applies to all programs for which this Directorate has checkout and launch responsibility and to all Launch Operations elements involved in vehicle prelaunch, launch, and post launch activities at the operational complexes and associated operational support areas.

3.1 RESPONSIBILITIES

In accordance with the provisions set forth herein, responsibilities are defined as follows:

a. Launch Operations, Requirements and Resources Office shall define policies and procedures; review requirements for austerity, intra-directorate compatibility and conformance to policy; identify problem areas and their solutions to the submitter, prepare composite Directorate of Launch Operations requirements documents for integrated space vehicle tests; and approve and publish all support requirements documents for the Director of Launch Operations. The Launch Operations, Requirements and Resources Office shall prepare the necessary instructions for compliance with the provisions of this directive to those contractors for whom it has supervisory responsibility. The Launch Operations, Requirements and Resources Office (LO-RRO) shall have the responsibility for approving all operational communication requirements for the Directorate of Launch Operations.

b. Launch Operations, Test Planning Office shall define and authenticate launch management support requirements for integrated space vehicle tests and operations, schedule and process submissions to conform with the official Directorate of Launch Operations planning schedule, and review support commitments for adequacy and compliance with requirements. The Launch Operations, Test Planning Office shall prepare the necessary instructions for compliance with the provisions of this directive to those contractors for whom it has supervisory responsibility.

c. Launch Vehicle Operations, Operations Management Office shall define and authenticate launch vehicle operational support requirements, review their contractor requirements for compatibility with directorate and center policy, assure that austere practices are exercised, schedule and process submissions to conform with the official Directorate of Launch Operations planning schedule, and review support commitments for adequacy and compliance with requirements. The Launch Vehicle Operations, Operations Management Office shall prepare the necessary instructions for compliance with the provisions of this directive to those contractors for whom the Directorate has supervisory responsibility.

d. Spacecraft Operations, Operations Division shall define and authenticate spacecraft operational support requirements, review their contractor requirements for compatibility with directorate and center policy, schedule and process submissions to conform with the official Directorate of Launch Operations planning schedule, assure that austere practices are exercised, and review support commitments for adequacy and compliance with requirements. The Spacecraft Operations Division shall prepare the necessary contractual instructions for compliance with the provisions of this directive to those contractors for whom it has supervisory responsibility.

4.1 PROCEDURES

4.1.1 FORMAT

All support requirements will be submitted to the Launch Operations, Requirements and Resources Office for processing as required by KMI 8660.2A/TS and Appendix thereto. The RD numbering system will be established and maintained by Launch Operations, Requirements and Resources Office.

The Launch Operations, Requirements and Resources Office will return submissions which involve changes in technical requirements to the submitter with appropriate comments for his amendment of the submission prior to release for publication. Submissions by the requester will be in accordance with the "Launch Operations Apollo/Saturn Sample Format Document" published by Directorate of Launch Operations and made part hereof.

4.1.2 DISTRIBUTION

The Launch Operations, Requirements and Resources Office will publish and distribute Requirements Documents and revisions thereto for the Director of Launch Operations. The responsible office of each directorate (paragraph 3.1 above) will define required distribution to LO-RRO.

4.1.3 REVIEW AND APPROVAL

All requirements will be formally transmitted to Launch Operations, Requirements and Resources Office after having been reviewed and approved by the respective organizations in each directorate and authenticated by signature. These reviews shall be performed to insure the following:

- a. Adequate and complete planning has been performed.
- b. Support requested is consistent with good operational procedures.
- c. Support requested is the minimum required to satisfactorily accomplish the test.
- d. Documentation preparation is in accordance with KMI 8660.2A/TS and the policies and procedures stated herein.

4.1.4 OPERATIONAL COMMUNICATIONS REQUIREMENTS

All requirements for support in the areas of OIS and operational point to point communications which are changes from the latest published BCRD shall be approved by LO-RRO prior to being imposed on IN-OIS for implementation. This approval will be accomplished as follows:

a. If the RD input contains only deletions and no additions or changes to the current communication system, except those which have been previously approved by LO, it will be submitted to LO-RRO with the following signed statement:
"The Voice Communication Requirements contained in this document describe changes which have previously been approved by LO."

b. If the RD input contains unapproved additions or changes to the current communication system, it will be submitted to LO-RRO with a brief statement identifying those changes with adequate justification for each.

c. Expedite requirements will be processed in the same manner as for RD inputs described in a and b above.

4.1.5 SCHEDULES AND SUBMISSIONS

Each organization within the Directorate of Launch Operations is required to

submit support requirements inputs defining support needed for each scheduled test or operational activity. Support requirements not classified as expedite should be prepared on reproducible format copies capable of being legibly printed. These support requirements will be specified whenever pre-planning, pre-coordination and/or repetition of a support requirement exists.

Launch Operations, Test Planning Office; Launch Vehicle Operations, Operations Management Office; and Spacecraft Operations, Operations Division will require submission of initial baseline requirements ninety (90) days prior to the officially scheduled or anticipated date for the test or activity. These requirements will then be submitted to the Launch Operations, Requirements and Resources Office seventy-five (75) days prior to the date support is required.

Changes and/or revisions to previously defined or submitted requirements that will be KSC supported shall be identified as early as possible, shall reference appropriate item in the published Launch Operations RD's, and shall be submitted to Launch Operations, Requirements and Resources Office no later than forty-one (41) days prior to scheduled test or operations dates. Changes occurring during the period within forty-one (41) days of the test or operation will be submitted as expedited requirements up until T-72 hours. From T-72 hours to the beginning of a test or operation only requirements involving configuration changes will be processed as an expedite requirement. Support requirements identified within 72 hours of a test or operation which do not involve configuration changes will be identified on the DLO 72 hour operations schedule and not by ER.

4.1.6 EXPEDITE REQUIREMENTS

Expedite requirements shall be prepared on KSC Form 4-61 and will contain only significant essential changes to the effective RD revision. In cases where the changes are complex, it is acceptable to attach the appropriate page from the latest revision of the published RD with changes "obviously and boldly" noted. After the start of active testing, all requirements will be processed through the KSC Test Support Controller.

Expedite requirements that are to be placed in the RD for retention must also be submitted as a normal RD input change.

4.1.7 SUPPORT COMMITMENTS

All Support Documents and their revisions shall be reviewed by the respective organizations in each directorate. These reviews shall be performed in order to assess the acceptability of the committed support and to develop plans for work around in coordination with Test Support Management. Each office shall, within five (5) days from receipt of the SD, prepare written comments on those SD items to which they take exception and forward them to the Launch Operations, Requirements and Resources Office.

4.1.8 PSRD, PLSR, LSR AND FSR EVALUATION AND SUPPORT

It will occasionally be necessary for elements of the Directorate of Launch Operations to provide support for items specified by the Program Support Requirements Documents (PSRD). Such support will be identified by the Director of Test Support to the Director of Launch Operations with a request to commit support. Launch Operations, Requirements and Resources Office will evaluate the propriety of the request and forward to the responsible office of paragraph 3.1 above as applicable. The recipient will evaluate the request, plan the support, and respond by commitment or challenge as appropriate. Launch Operations, Requirements and Resources Office will integrate the response and provide a commitment to Technical Support.

Each organization within Launch Operations is required to review PLSR's, LSR's and FSR's in order to assess the effect and/or the acceptability of these requirements as they may apply to their activities. Each office is required to provide the appropriate response and/or comments to Launch Operations, Requirements and Resources Office on those requirements which affect their activities. The required response time will depend upon each requirement and will be so stated on the review transmittal.

End of Directive